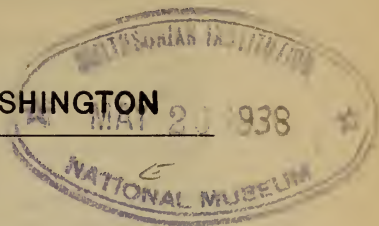


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A NEW BURROWING FROG AND A NEW LIZARD
FROM HAINAN ISLAND.

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Herein are described two new subspecies of reptiles and amphibians in the Museum of Vertebrate Zoology of the University of California, at Berkeley, collected by the writer on a trip¹ to Hainan Island, south of China, during the summer of 1935. The first is a subspecies of *Kaloula pulchra*, a widely distributed oriental brevicipitid or burrowing frog of the family Microhylidae, from the eastern lowlands of Hainan; the second is a subspecies of a Formosan lacertid, *Platyplacopus kuehnei*, taken in the mountains of the interior of the island. The burrowing frog has been once before recorded from Hainan, but was not considered distinct from the typical mainland form, with which I have compared it.

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Genus *KALOULA* Gray, 1831.

Kaloula pulchra hainana, new subspecies.

Kaloula pulchra pulchra, Parker, 1934, Monogr. Microhylidae: 84 (part: Hainan), (not of Gray, 1831, Zoöl. Misc.: 38).

Type.—Adult female; No. 23189, Mus. Vert. Zoöl.; from Kachek, alt. 25 meters, eastcentral Hainan Island, South China Sea (lat. 18° 50' N., long. 110° 30' E.), August 7, 1935, J. L. Gressitt.

Paratype.—Adult male; No. 23188, Mus. Vert. Zoöl.; same data as type.

Diagnosis.—A large burrowing frog with heavy body, differing from *Kaloula pulchra pulchra* Gray in having the skin densely tuberculate over

¹Gressitt, J. L.: Notes on collecting in Hainan Island with data on localities, Lingnan Science Journal, 15: 465-470, July, 1936; New reptiles from Formosa and Hainan, Proc. Biol. Soc. Wash., 49: 117-122, Aug., 1936.

entire ventral surface as well as on sides of body and around vent, the discs of fingers no wider, and those of the toes narrower, than the respective penultimate articulations.

Description of type.—Snout short, blunt, submarginate apically, shorter than diameter of eye; canthus rostralis rounded; internasal distance three-fourths as great as interorbital distance; upper eye-lid one-half as wide as interorbital distance; a very weak, arcuate fold across occiput. Fingers moderately flattened, broader towards apices, tips truncate; discs hardly as wide as bases of apical phalanges, second finger nearly as long as fourth. Toes flattened, webbed basally and margined at sides, gradually tapering to apices, all but third and fourth toes shorter than first finger, fourth toe barely longer than third finger; subarticular tubercles large, but very feebly swollen; metatarsal tubercles large, subapproximate, inner one very prominent, spade-like; second toe extending nearly as far as fifth; tips of toes not swollen, distinctly narrower than penultimate phalanges. Tibio-tarsal articulation not reaching shoulder when hind leg stretched along side of body.

Skin moderately smooth on interorbital region and middle of back, densely and distinctly tuberculate over entire ventral surface, sides of body, thighs and region around vent; feebly tuberculate on sides of back, arms and feet.

Dorsal surface dark purplish brown, anterior portion of head, bounded by a line between middle of upper eye-lids, and a slightly sinuous dorso-lateral stripe from above eye to groin, of a lighter, pinkish or yellowish brown, narrowly bordered with pale; arms and legs dark brown, finely dotted with pale; tips of fingers and toes, and metatarsal tubercles dirty yellow; chin mottled brownish; lower sides of neck, throat and ventral surface of body dirty pale yellow, finely speckled with darker.

Notes on paratype.—The male differs from the female in having the throat and ventral surface more strongly tuberculate, the chin and throat black, dotted with white, the light dorso-lateral stripe finely edged with yellow and the back with some irregular blotches.

Measurements.—(Type and paratype, respectively): Length, from snout to vent, 75, 69 mm.; length of head, from snout to a line between posterior corners of eyes, 11, 10.5; distance between nostrils, 6, 5.2; distance from middle of nostril to eye, 4, 3.5; length of eye, 8, 7; width of head between hind corners of eyes, 21, 20; length of fore limb, 47, 44; length of hand, 24, 22; length of hind limb, 65, 64; tibia, 25, 24; foot, 29, 26.

Comparisons.—Differs from *Kaloula pulchra pulchra* Gray in having the snout shorter, the hind legs shorter, the second toe longer, the fingers with the discs much less swollen, and narrower, instead of broader, than the bases of the apical phalanges, the toes margined with a fringe of webbing and having much less distinct apical discs and subarticular tubercles, and the skin much more tuberculate on ventral surface, sides and thighs. The dorso-lateral pale stripe is narrow and distinctly margined.

Notes.—The stomachs contained remains of termites.

Genus PLATYPLACOPUS Boulenger, 1917.

Platyplacopus kuehnei carinatus, new subspecies.

Type.—Adult male; No. 23519, Mus. Vert. Zoöl.; Ta Han, alt. 775 meters, central part of Hainan Island, S. China, June 23, 1935, J. L. Gressitt.

Diagnosis.—Dorsals large, in six longitudinal rows, the inner four discontinuous at the middle; ventrals in six rows, all carinate and mucronate; snout subacute; prefrontals in contact for most of their length; loreals two, subequal in size; four pairs of postmentals; four inguinal pores on each side; dorsal surface brown, becoming slightly greenish laterally, lateral stripe light brown on head and neck, mottled black and golden on body, lower surfaces white with mother of pearl tints; feet yellow beneath.

Description of type.—Rostral not touching internasal (internasal divided into two unequal scales); prefrontals large, in contact for most of their length; frontal gradually narrowed posteriorly, equally angulated anteriorly and posteriorly; anterior and posterior supraocular separated from parietal by a small transverse plate; frontoparietals large; interparietal parallel-sided anteriorly, acute behind, not touching the triangular occipital; parietals smooth, nearly as broad as long. Postnasal absent; nasal small; anterior loreal nearly as large as posterior loreal; scales bordering lower eye-lid large, only 8 in number; temporals minute, keeled, no elongate ones bordering parietals; supralabials 7-6, the subocular produced anteriorly above the preceding. Mental equal in length to first postmental; four pairs separated by small throat scales, second pair only slightly separated. Dorsals in six longitudinal rows, but all except outermost discontinuous just behind middle of body, innermost pair approximate in anterior half and more distant posteriorly; sides covered with small granular scales, in about 18 longitudinal rows behind fore limb and 9 in front of hind limb, uppermost row and some of lower ones carinate, but marginal rows hardly enlarged; ventrals in six regular rows, all carinate and all more or less mucronate, particularly posteriorly, outer row most strongly carinate; femoral pores 4-4; preanal single, rounded behind, a small scale at each side of it. Hind limb stretched forward reaches front of humerus.

Color brown above, slightly tinged with green on snout, occiput, sides of nape and outer dorsal scale-rows; lateral stripe chestnut brown on head, margined below with black from snout to middle of neck, behind which it is composed of intermixed groups of black and golden or greenish granules; lower portions of sides of body pale golden to greenish; lower portions of sides of head and neck, and ventral surfaces of body white, tinged with nacreous green or blue-green, particularly on lower part of loreal region, hind angle of mouth, tympanic membrane and belly; legs brown above, finely dotted with black, and white below, with undersides of hands and feet and inguinal pores yellow; tail reddish brown, paler beneath.

Measurements.—Snout to vent, 53 mm.; vent to tip of tail, 142; snout to tympanum, 13.2; width of head, 7; fore limb, 21.5; hind limb, 29; base of fifth, to tip of fourth, toe, 13.5.

Comparisons.—Differs from *P. kuehnei kuehnei* (Van Denburgh) (1909,

Proc. Calif. Acad. Sci., (4) 3: 50; l. c., 1912: 252) in having the snout more acute, the dorsal plates smoother, the prefrontals larger, the suture between them over twice as long, the parietals shorter, the anterior loreal larger, the postmentals narrower, the last three pairs of which, instead of the last one and one-half, separated. In *P. k. carinatus* the dorsal scale rows are not continuous at middle, an anterior vertebral row is lacking, the lateral granular scales are in fewer rows than in *P. k. kuehnei*, the marginal rows are of much smaller scales, the ventrals are all carinate and angulated apically, instead of having the inner four rows smooth, and rounded behind, the hind legs are longer, the color is more brownish and less olive, and many of the scales have an iridescent lustre; the lateral stripe is more conspicuous, browner on head, and black and golden, instead of dull olive, on body, the undersurfaces of the body have a nacreous lustre and the undersides of hands and feet are yellowish, instead of pink, in *carinatus*. The division of the internasal is probably an abnormal condition. There is a vestige of a fifth femoral pore on each side.